

# Indiana's Response to Intervention Academy



Data-Based Decision Making  
(Beginning)

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# OUTCOMES

*As a result of this presentation, you will. . .*

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- ▣ Have a basic understanding of the need for quality instruction to be based on a systematic process of data collection, analysis and reporting.
- ▣ Understand a basic problem solving model and its application to educational settings.
- ▣ Examine how school leadership teams systematically utilize data to facilitate decision-making to address curriculum, instruction and behavioral needs

# Critical Elements to Implement RTI

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- ❑ Well functioning school-based leadership team and problem-solving team
- ❑ School-wide screening & progress monitoring
- ❑ Systematic analysis of school-wide data
- ❑ Examination of current core academic and behavioral programs
- ❑ Identification of evidence-based interventions at tiers 2 and 3
- ❑ Determination of who will monitor progress monitoring
- ❑ Framework for data-based decision making

# Data-Based Decision Making

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**DATA**

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**DECISION-MAKING**



# DATA

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**“Without data all anyone  
has is an opinion.”**

**Edward Deming**

# Data Types: Quantitative

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## **Summative Assessment Data**

- Summative assessments are used to determine how well we have met our instructional objectives.  
E.g.:
  - State assessments
  - District benchmark or interim assessments
  - End-of-unit or chapter tests
  - End-of-term or semester exams
  - Scores that are used for accountability for schools (AYP) and students (report card grades)

## **Formative Assessment Data**

- “Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students’ achievement of intended outcomes.”

State Collaborative on Assessment and Student Standards (2006)

Formative Assessment: “a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students’ achievement of intended outcomes.”

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- ❑ formative assessment is a **process**
- ❑ used by both **teachers and students**
- ❑ takes place **during instruction**
- ❑ provides **assessment-based feedback**
- ❑ for the purpose of **making adjustments** to teaching & learning (immediate adjustments, not adjustments to be made the next time I teach this unit)

# Formative assessment “informs” the teaching/learning process

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- Universal Screening
  - Reading
  - Math
  - Social/Emotional
- Progress monitoring
  - Reading
  - Math
  - Social/Emotional



# Data Types: Qualitative

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- ❑ Family Information
- ❑ Cultural, Ethnic Information
- ❑ Self-Reports
- ❑ Observational
- ❑ Informal/Formal Interviews or Surveys

# Integrated System for Academic and Behavioral Supports

*Family & Community involvement at each tier*

## **Tier 3:**

- Few Students
- Increased Frequency
- Longer Duration

**Intense, Individualized Support**

*Services across tiers are fluid and data-driven*

**District/Community Team  
Building Core Team**

## **Tier 2:**

- At-Risk Students
- Small Group

**Targeted, Supplemental Supports**

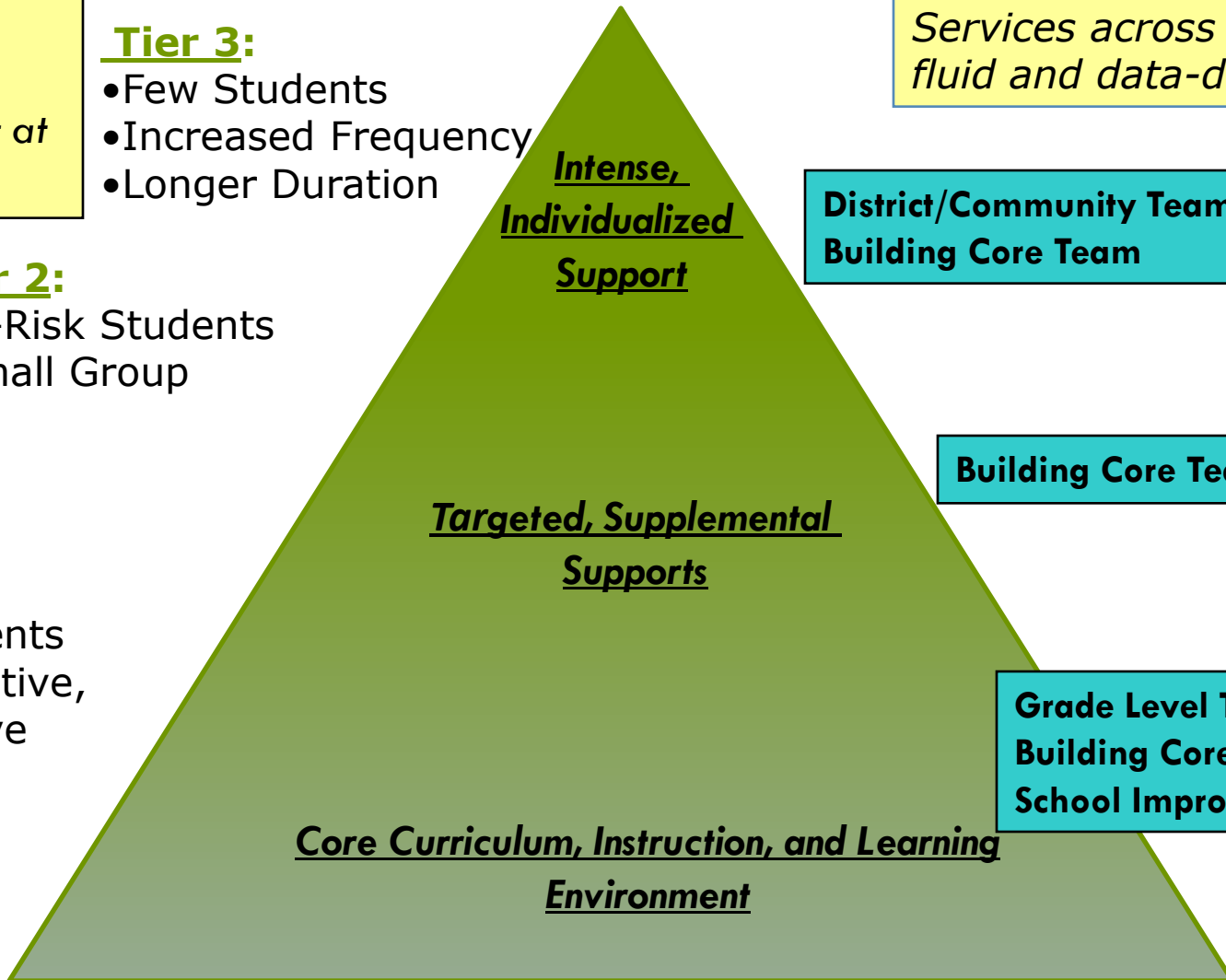
**Building Core Team**

## **Tier 1:**

- All Students
- Preventative, Proactive

**Core Curriculum, Instruction, and Learning Environment**

**Grade Level Teams  
Building Core Team  
School Improvement Team**



# Data collection, analysis & sharing

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- Setting
- What data will be collected?
- How will the data be collected?
- When will the data be collected & by whom?
- How often will the data be analyzed & by whom?
- How will the data be communicated & to whom?

Adapted from material presented by Ron Benner at the Indiana Response to Intervention Conference, October 13-16, 2008

# Example: SW-PBS

Level: District & School

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## ❑ What to collect:

- Office Discipline Referrals (ODRs)
- Suspension & Expulsion Records

## ❑ What to look for:

- What types of problem behaviors are occurring
- Where are they occurring
- What time are they occurring
- Who (e.g. a particular grade level, a particular sub-group of students?)

# Example: Curriculum Based Measurement

## Level: Student

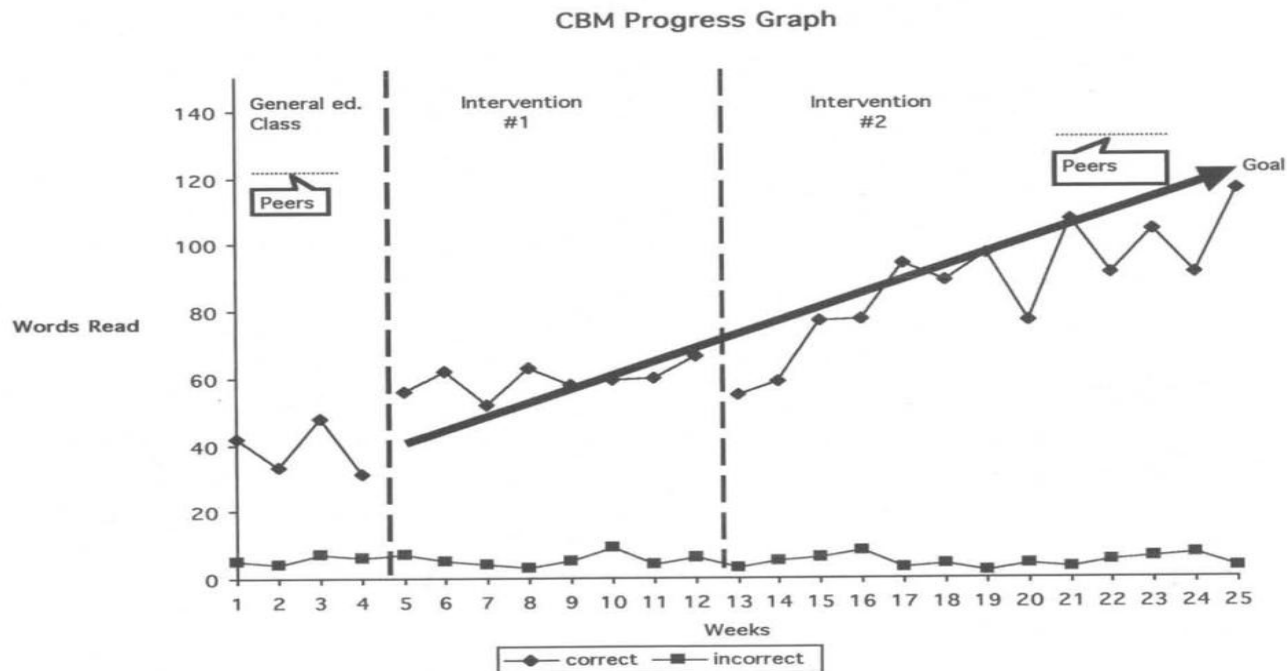


FIGURE 1. CBM progress graph.

# Data-based Decision Making . . .

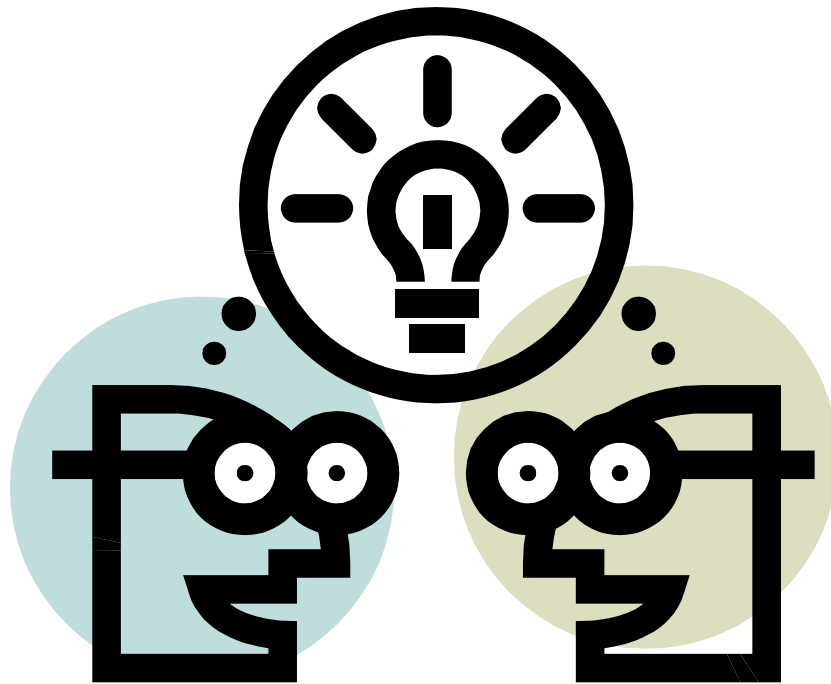
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- ▣ guides us, within a public, objective and normative framework, to analyze student data and to guide classroom, school and district level decisions on instructional changes, choices of interventions and appropriate rates of progress.

Adapted from material presented by Ron Benner at the Indiana Response to Intervention Conference, October 13-16, 2008

# How do we solve problems?

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# Education is about making decisions:

at the district level, the school level, the classroom level and at the student level

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What is it we expect  
all students to learn?  
What will we do when  
they do not learn?

DuFour & Eaker



Is there a problem and what is  
it?

Why is the problem  
happening?

What can be done about the  
problem?

Did the intervention work?

Tilly

Is an adjustment  
needed and, if so,  
what should the  
adjustment be?

Popham



# Jefferson Memorial Problem

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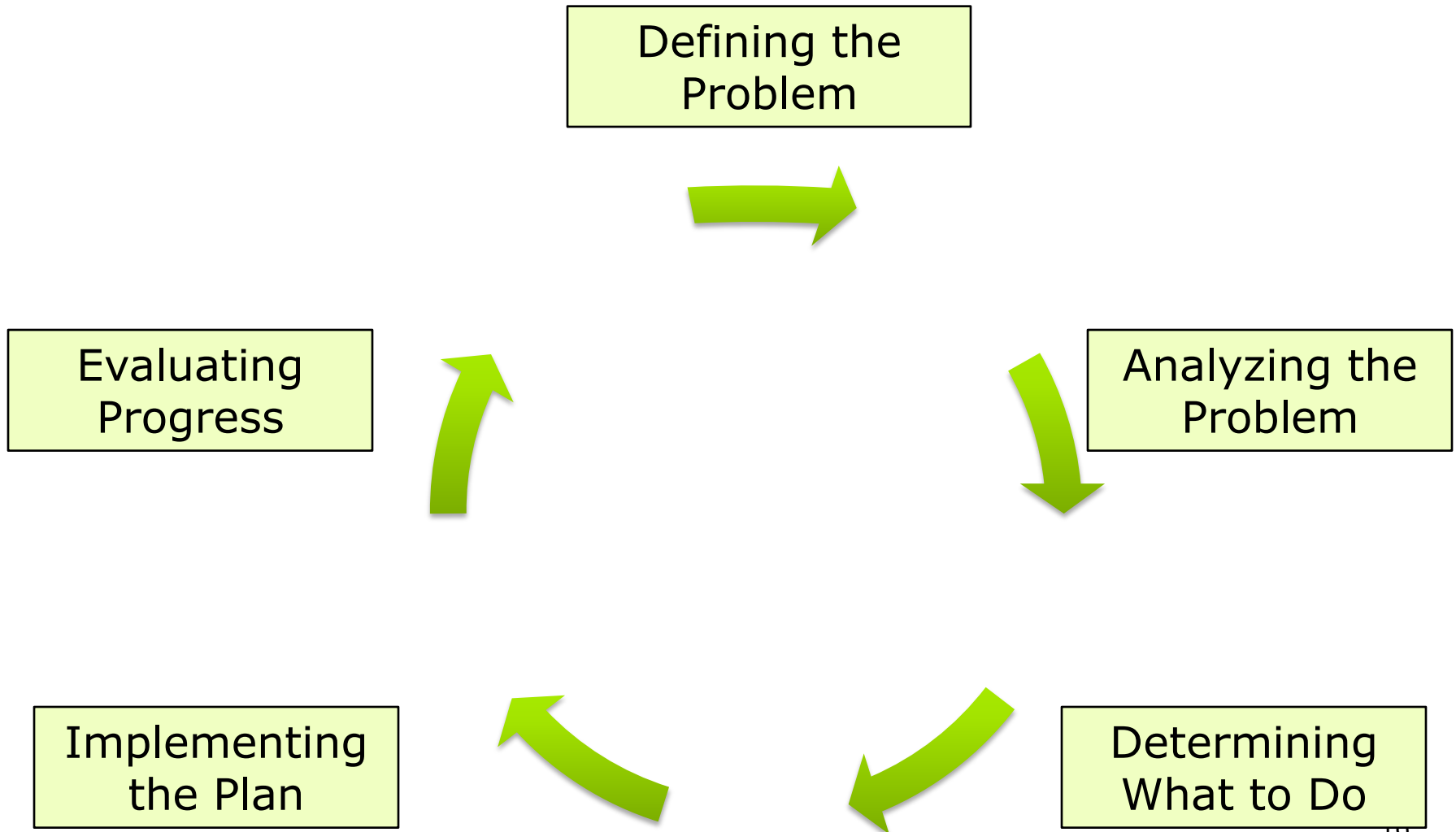
# Problem Solving Method

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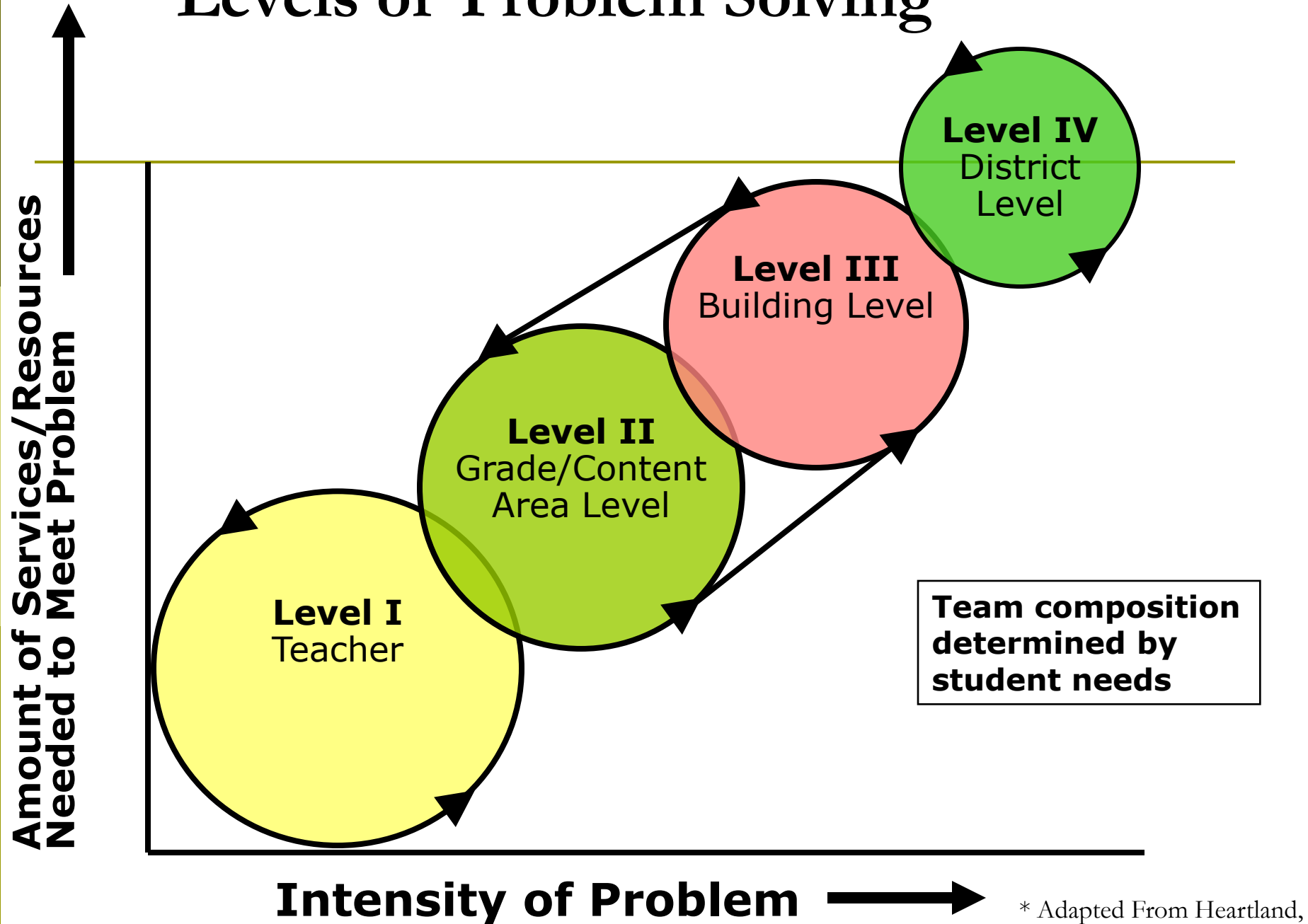
- Refers to a data-based decision making process that occurs at each tier of service delivery to
  - Determine interventions,
  - Determine the effectiveness of intervention, and
  - Provide for frequent progress monitoring

# Problem Solving Method

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# Levels of Problem Solving



\* Adapted From Heartland,  
IA AEA Model

# RtI calls for a shift in thinking

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The central question is not  
“What about the students is causing the performance discrepancy?”

But

“What about the interaction of the curriculum, instruction, learners, and learning environment should be altered so that students learn?”

Howell

# Four Considerations within Problem Solving

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- Curriculum
  - “what is taught”
  - Instructional philosophy/approaches, content, & pacing
- Instruction
  - “how it’s taught”
  - Materials, direct instruction with explanation and cues, clear expectations and goals, sequencing
- Environment
  - “where instruction takes place”
  - Physical arrangement, rules, routines, expectations
- Learner
  - “who’s being taught”
  - Motivation, abilities
  - Considered after the above are addressed, if needed.

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A Look at Each Step in the Process

# **PROBLEM DEFINITION**

# Problem Definition

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## ***"What is the Problem?"***

- Need clear and specific descriptions
- Identify the desired outcome
- Difference between the observed and the desired indicates severity



# What's the “problem” with the Jefferson Memorial?

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- ❑ 1. Birds are making a mess on the memorial.
- ❑ 2. Cleaning solutions are too harsh.
- ❑ 3. The memorial is showing excessive wear.

# Problem Definition

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Tier	Considerations	Problem Solving Team
III	<ul style="list-style-type: none"> <li>▪How does a given student's performance level differ from the desired criterion?</li> </ul>	<ul style="list-style-type: none"> <li>▪Building/Core Team</li> <li>▪District Team</li> </ul>
II	<ul style="list-style-type: none"> <li>▪How does a given student's performance level differ from the desired criterion?</li> </ul>	<ul style="list-style-type: none"> <li>▪Building/Core Team</li> <li>▪Grade Level/Content Area Team</li> </ul>
I	<ul style="list-style-type: none"> <li>▪How significant is the behavior of concern?</li> <li>▪How many students are proficient/at benchmark?</li> <li>▪Is it an individual or group problem?</li> </ul>	<ul style="list-style-type: none"> <li>▪School Leadership/Improvement Team</li> <li>▪Grade Level/Content Area Teams</li> <li>▪Teachers</li> </ul>

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A Look at Each Step in the Process

# **PROBLEM ANALYSIS**

# Look Beneath the Surface

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What data do we need to develop a hypothesis?

# Let's go back to the Jefferson Memorial

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- ❑ How did problem analysis progress and what did it reveal in the Jefferson Memorial problem?
- ❑ It wasn't just the birds pooping on the memorial.
- ❑ It involved multi-level questioning and the use of outside technical assistance.

# Problem Analysis

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## ***"Why is the problem occurring?"***

- ❑ Focus on instructionally relevant and changeable variables.
- ❑ Consider the domains of influence: curriculum, instruction, environment.
- ❑ Apply professional knowledge of content (importance of team composition and expertise).
- ❑ Prioritize and sequence instruction.

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A Look at Each Step in the Process

# **PLAN DEVELOPMENT**

# Plan Development

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***"What are we going to do about it?"***

- ❑ Focus on a measurable goal (s)
- ❑ Address the hypotheses reached during problem analysis
- ❑ Identify the materials, procedures, frequency, duration, starting date, and person providing the instruction
- ❑ Develop a progress monitoring plan including assessment, frequency, and who will collect
- ❑ Schedule time and procedures for reviewing the data



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A Look at Each Step in the Process

# **PLAN IMPLEMENTATION**

# Plan Implementation

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***"Are we implementing the intervention as intended?"***

***"Are we collecting progress monitoring data?"***

# Remember, interventions should. . .

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- ❑ match the curriculum that is being taught
- ❑ match the problem that has been identified
- ❑ match the severity and intensity needed to effect change

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MSD Wayne Township, Indianapolis, IN

# Implementation Fidelity

- Addresses the questions
  - “was the intervention implemented as planned?”
  - “was it feasible?”
- Reviewing implementation fidelity data supports the team to make appropriate decisions about
  - the effectiveness of an intervention and
  - the future needs of a given student.

# Ways to Measure Implementation Fidelity

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- ❑ Self-report checklists
- ❑ Interviews
- ❑ Observations with optional performance feedback



Each requires.....

- a clear definition of the intervention,
- statements of who, when, how often, how long

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A Look at Each Step in the Process

# **EVALUATING PROGRESS**

# Evaluate Progress

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## ***"Did it work?"***

- ❑ Consider integrity of plan implementation
- ❑ Progress monitoring data reviewed
- ❑ Ineffective plans modified in a timely manner
- ❑ Intervention plans modified as appropriate to address emerging needs

# Use of the Problem Solving Method

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- ▣ Integrates data and decision-making
- ▣ Facilitates more efficient, structured meetings
- ▣ Informs instructional decisions and the development of targeted interventions



# References

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